

# Applying the Balanced Scorecard and the Delphi Method to Determine the Key Performance Factors for the Banking Industry in Iran

## Hadi Keshavarznia, Mario Wallace

College of Business and Management, Walden University, Minneapolis, USA Email: Hadikeshavarz77@yahoo.com, Wallacemariod@gmail.com

How to cite this paper: Keshavarznia, H., & Wallace, M. (2023). Applying the Balanced Scorecard and the Delphi Method to Determine the Key Performance Factors for the Banking Industry in Iran. *Open Journal of Business and Management, 11*, 821-838. https://doi.org/10.4236/ojbm.2023.113044

**Received:** February 22, 2023 **Accepted:** April 4, 2023 **Published:** April 7, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

http://creativecommons.org/licenses/by/4.0/

# Abstract

The lack of having an anchored, strategy management performance infrastructure prevents leaders from evaluating the performance strengths of the organization's strategic priorities. Evaluating the strategic performance of an organization is critical to the success and sustainability of a high-performing organization. The key is to evaluate the strategic performance of an organization using a strategy management performance system that consistently provides leaders with valid information to make informed strategic decisions. The Balanced Scorecard (BSC) is one of the leading strategy management performance systems that provides the infrastructure for evaluating the strategic performance of an organization. The BSC is a multidimensional strategy management performance system that links tangible financial assets with intangible nonfinancial assets in a cause-and-effect logic to evaluate the success of a strategy. The aim of this study was to identify the objectives and key performance factors (KPFs) for the banking industry in Iran. The population for this study consisted of 20 experts from multiple banks in Iran. A purposive judgmental ample was used to arrive at the sample of 20 participants. A questionnaire was used to collect the data in the study. The Delphi method was employed as the analysis mechanism to arrive at a consensus. The study concluded that the success of the banks in Iran depends on four financial perspective objectives and four KPFs; three stakeholder perspective objectives and five KPFs; three internal process perspective objectives and six KPFs; and three learning and growth perspective objectives and three KPFs. The identified objectives and KPFs are characterized as the strategic performance priorities for success in the Iranian banking industry.

#### **Keywords**

Strategy, Balanced Scorecard, Key Performance Factors, Banking Industry, Iran, Delphi

#### **1. Introduction**

Strategic planning is an executive activity that produces considerable competitive advantages for an organization when done correctly (Kaplan & Norton, 2006). The goal of the strategic planning activity is to sense, seize, and reconfigure market data and develop a competitive plan that is translated in the organization to create sustained competitive advantage (Breznik & Lahovnik, 2014; Teece, 2000). Although strategic planning has existed for years, some leaders in organizations fail in their attempt to effectively use the practice of strategic planning to drive performance in an organization.

In a survey administered by the Palladium Group in 2017, the findings were 60% of companies had strategies that were not tied to their budgets, 70% of companies did not build in an incentive or compensation program into their strategy, and 50% of companies did not have an evaluation process to review their strategy (Norton, 2017). These numbers show this is not an isolated phenomenon. It is something common across all industries. The inability to effectively use the practice of strategic planning to evaluate the performance strength of their organization prevents leaders from mobilizing their people who must engage in the work.

To sustain in business, leaders must successfully use strategic planning to develop their objectives and key performance factors (KPFs), translate their strategy into the organization, and evaluate their organization's performance. In this research study, KPFs are considered outcome and process measures. Leaders must create strategic plans using a succinct multidimensional strategy system that structures objectives and KPFs in a way to evaluate performance and progress of the strategy. The Balanced Scorecard (BSC) is one of the best strategy management systems and is designed to evaluate performance in an organization. The BSC is the most researched and proven strategy management system that offers a concise approach for using strategic planning to drive performance in an organization (Risinger, 2018). Kaplan and Norton (2008) introduced the BSC method as a strategy management system not only for performance evaluation but also as a framework for formulating and translating strategy into an organization. Therefore, balanced evaluation is not only a tool for assessing strategies but also a strategic evaluation system (Kaplan & Norton, 2008; Risinger, 2018).

Leaders in the banking industry in Iran seek to identify the objectives and KPFs to evaluate the strategic performance of their organization. They search for a strategy management system and tool that helps drive decision-making within banks or across multiple banking sites. These leaders want to compete as a banking system by establishing a set of strategic priorities that are supported by an evaluation tool to measure progress at different levels in a bank.

The purpose of this research study is to identify a standard set of objectives and KPFs that can be used to evaluate the strategic performance of banks in Iran. The results of the study will help banks in Iran grow and sustain a competitive advantage.

#### 2. Background

#### 2.1. History of Banking in Iran

Since the 19<sup>th</sup> century, the Iranian banking industry was primarily established to play a key role in the country's modernization and economic development. Since its inception, the Iranian banking industry has gone through four stages, and each stage has a special feature that distinguishes them according to the political situation of Iran.

The first stage occurred from 1888 to 1949. During this period, the banking operations in Iran started with the establishment of several banks in the capital and several large cities. The second stage occurred between 1950 and 1978 when the process of forming private banks increased and banking laws were approved, corrected, and completed. Private banks were formed alongside state banks during this time, and international capitals were used in Iran's banking. The third stage of the Iranian banking industry occurred between 1978 and 1998, and during this period, the Islamic revolution won and ruled in Iran. The revolution created a strain on the economy and caused factors such as loss of public trust in banks, transfer of deposits outside of Iran. And delayed bank claims. Despite the help of the Central Bank, the operations of most private banks were stopped.

In 1978, the ownership of all banks was taken away from the private sector and transferred to the government. The fourth stage occurred between 1999 and 2009 when the administration of the completely governmental structure in Iran's banking industry continued until 1999, and with the approval of the law in the same year, permission was given to the private sector to establish a bank. Currently, a total of eight state banks and 19 private banks are operating in Iran. Lastly, from 2009 to 2023, Iran's banking industry has remained composed of private and state banks, and changes generally occur in the areas of service provided to bank customers.

In recent years, the Iranian government has taken steps to reform the banking sector and improve its stability and efficiency. This includes measures such as the creation of a new central bank, the Central Bank of the Islamic Republic of Iran, and the implementation of new regulations.

#### 2.2. Problem Statement

Due to political unrest, international competition, the critical role of banks in Iran, and insufficient development of the capital market in Iran, banks have the main and fundamental task of financing the needs of medium-term and long-term economic plans of financially viable enterprises in the country. The economic challenges in this industry in recent years have shaped the situation in such a way that the lack of a general policy to achieve the goals and visions of the organization has caused significant damages and sometimes led to internal bank-ruptcy of the banking sector.

In the Iranian banking industry, traditional business methods have not been effective, executive decisions are not spread throughout the organization, and until recently, most of the leadership positions are occupied by non-specialists. The Iranian banking industry relies on seniority rather than short-term or long-term performance to promote employees. As a result, leaders in the Iranian banking industry seek to identify objectives and KPFs to develop, evaluate, grow, and strengthen the banking system in Iran.

## **3. Literature Review**

The aim of this study is to identify the objectives and key factors for evaluating performance in the Iranian banking industry. To review the literature for this research, it is important to review seminal and current research related to the practice of strategic planning and the role of strategy management evaluation systems. When researching strategy management systems, it is also important to discuss the role of these systems in the banking industry.

Today, businesses operate in competitive strategic industries, and the most successful ones are guided by strategy-focused planning (Kaplan & Norton, 2001). Strategic planning is a process of developing a strategic vision, aligning the firm to the vision, and managing the implementation process (Kaplan & Norton, 2001). Sensing, seizing, and reconfiguring market and internal data is crucial in the strategic planning process (Barney, 1991; Breznik & Lahovnik, 2014; Kaplan & Norton, 2008; Teece, 2000). A firm can create the best strategic plan in the world, but if it is not translated throughout the firm, managed, and consistently evaluated, it is only a work of prose that guides no one (Kaplan & Norton, 2008). Wilson et al. (2004) contend that strategic performance is accomplished by establishing the right objectives and indicators and managing performance overtime. Although establishing the right indicators to evaluate a firm's performance over time is ideal, having the right strategy management performance evaluation systems is imperative.

Kaplan and Norton (2001) argue that performance is achieved by having an effective strategy management system that provides a way to manage and evaluate the progress of strategic priorities in a strategic plan. Since the early 1900s, strategy management systems such as the Hoshin Kanri Planning, Performance Pyramid, and Skandia Guide offered solutions for managing the performance of a strategic plan (Gazi, Atan, & Kılıç, 2022). These tools offered a strategic and standard approach for managing the performance of a strategic plan, but they did not offer a multidimensional perspective of strategy management or systemically evaluate the strategic factors of a plan (Bremser & White, 2000; Kaplan &

Norton, 2008). These strategy management tools heavily accentuated the financial outcomes of the strategic plan without any consideration for the customer's expectations, operational factors, and talent solutions. These strategy management systems failed to stress other strategic factors beyond the financial outcomes or stratify strategic performance across multiple tiers in a firm to elevate decision-making. In 1992, Kaplan and Norton introduced the BSC, a multidimensional strategy system that not only measured financial tangible outcomes but also non-financial intangible drivers (Kaplan & Norton, 2004).

The BSC translates a strategic vision into organizational performance metrics for executing and operationalizing the strategic priorities for an organization (Kaplan & Norton, 2004). The BSC organizes the strategic priorities in a complex matrix called a strategy map in order to add four critical performance perspectives to a firm-financial, customer, internal process, and learning and growth (Kaplan & Norton, 2004). The financial perspective includes objectives that support the short- and long-term return on investment and return by the institution; the customer perspective includes objectives that contribute to the institution's value proposition for customers; the internal process perspective includes objectives that support the creation and delivery of value to stakeholders; and the learning-and-growth perspective includes objectives that support the human capital, technological capital, and cultural capital that drive performance improvement (Kaplan & Norton, 2004). (Figure 1 adapted from the Premium Execution)

The perspectives of the BSC are not fixed but adapted to support the performance evaluation process in a firm. Gentry (2003) used the BSC to compile objectives and performance measures for California State University and implemented them using the BSC strategy management system. Leaders throughout the university have a defined line of sight regarding their assigned strategic priorities and were able make data-driven decisions to improve the performance of the university's strategy. Having a balanced evaluation system that consists of the four perspectives allows employees to discuss the assumptions, learn from unexpected results, and make future adjustments as needed. Leaders in the Iranian banking industry seek a strategy management evaluation solution that leverages shared decision-making throughout a bank while addressing assumptions that advance their strategy and drive performance.

Some leaders in the banking industry use the BSC to develop plans to compete in the banking industry, evaluate performance, and mobilize resources to sustain a competitive advantage. Ibrahim and Murtala (2015) conducted research aimed at examining the relevance of the BSC as a performance assessment tool in the Nigerian banking industry. The researchers developed a survey that centered around the four perspectives of the BSC. The goal was to examine how relevant the four perspectives of the BSC were as a way to evaluate performance. Eleven banks were included in the study, and a total of 43 participants completed surveys. The results of their study revealed the BSC can improve the performance of banks.



Figure 1. Four perspectives of the balanced scorecard methodology. Source: Premium Execution.

Rostami, Goudarzi, and Zaj (2015) conducted research to define the BSC aspects in banking. They developed a survey that consisted of 56 indicators related to the four perspectives, and participants had to rank the perspective by importance. The results of the study revealed the customer perspective was the most important followed by the financial perspective and lastly the learning and growth perspective. Ozturk and Coskun (2014) conducted a literature review of strategic approaches to performance management in banks. The study revealed that the best way to evaluate performance management in banks is to use the four perspectives of the BSC.

Bošković and Krstić (2020) conducted research to examine the combined use of the BSC and Data Envelopment Analysis in banking. The results of the study revealed that if the BSC is used first in application followed by the CEA model, leaders can effectively measure performance in a bank.

Keshavarznia and Valipour (2017) conducted a feasibility study at the Mehr-e Eghtesad Bank using the BSC as a tool for evaluating performance. In this study, they investigated the banking industry's facilities, infrastructure, and systems to implement the plan. The results indicated the bank had the systems, infrastructure, and information tools needed to implement the BSC. The results also identified that the existing strategic plan did not have a robust strategic plan or a logistic strategy to translate the strategy to their employees (Keshavarznia & Valipour, 2017). The results revealed that the proper use of the BSC can leverage many hidden capabilities in organization and help a firm mobile its resources and advance its strategic plan. Organizations that effectively use the BSC are those that are aligned to better leverage their internal resources (Kaplan & Norton, 2008).

The current study examined objectives and KPFs in the banking industry. Researchers sought to discover and introduce the basic performance factors that could improve the current state of the banking industry. Researchers deployed the Delphi method in this study. The Delphi method assures anonymity of responses and takes less time for panelists to pool opinions. The goal of the Delphi method is to collect data and arrive at a group consensus from a group of experts.

# 4. Methodology

The 12-month study evaluated the responses of experts of the Iranian banking industry to determine the desired objectives and key performance indicators for banks in Iran. The experts came from different banks in Iran. The BSC and the Delphi method were the two instruments used for structuring the research study and evaluating the objectives and key performance indicators for the Iranian banking industry. The Delphi method was selected as the tool to gain the consensus of the participants in the study.

Researchers reviewed multiple strategic plans from banks in Iran and conducted a literature review to identify a list of potential objectives and KPFs in the banking industry. Researchers used the information gathered from the literature to develop a list of objectives and KPFs for the banking industry in Iran. Researchers also developed a standard interview guide with research questions and a Likert scale to collect responses to the objectives and KPFs used during the interviews. The Liker scale consists of very low, low, no idea, high, and very high answer options.

The researchers developed a criterion for electing the participants for the study. The participants had to fit the following criteria:

1) Experts in the banking industry with at least ten years of work experience in specialized and operational positions. This group mainly uses management accounting information.

2) Relative familiarity with the system and structure of the BSC. This group includes people with a minimum master's degree in management, accounting, and banking.

3) Experts who are experienced in making data-driven decisions based on strategic outcomes. This group includes operational and macro-managers or their advisors.

4) Full or partial familiarity with the banking industry's balance sheet structure and accounting systems.

A purposive judgmental sample was used in the research to arrive at the sample size. Early participants who joined in the study were asked to identify other people who met the criteria of the research study. The sample size for the research study concluded with 20 people.

Using the questionnaire consisting of objectives and key performance factors, the Delphi method was employed as the analysis mechanism to arrive at a consensus.

# 5. Results and Discussion

The data collected in this study using a questionnaire is presented and analyzed using the Delphi method. The research and discussion section included the subsections of scale of consensus, data analysis, and the first, second, and third stage of the Delphi method.

#### **Scale of Consensus**

The Kendall Coefficient of Coordination was used to determine the consensus among the panel members. The Kendall coefficient of coordination measures the degree of coherence and agreement between several rank categories related to the N object or individual. Using this scale, one can find the rank correlation between k rank sets. This scale is calculated using the following equation:

$$w = \frac{s}{\frac{1}{12}k^2\left(N^3 - N\right)}$$

where in the Sum of the squares of the deviations of *RJs* from the mean *RJs* is as follows:

$$s = \sum \left[ R_j - \frac{\sum R_j}{N} \right]^2$$

In this equation, *RJ*, *K*, and *N* are the sum of the ratings for an agent, the Number of Ratings Collections (Referees) and number of rated factors, responsibility and  $\frac{1}{12}k^2(N^3 - N)$  is the maximum of the Sum of squares of deviations from the mean of *RJs* (i.e. the Sum of *S* which is observed if there is complete agreement between the *K* rankings).

The value of this scale is equal to one at the time of complete coordination or agreement and zero at the time of complete non-coordination. Schmidt offers two statistical criteria for deciding whether to stop or continue the Delphi stages. The first criterion is the solid theoretical agreement between the panel members which is determined by the value of the Kendall Coefficient (Schmidt, 1997). In the absence of such a consensus, the persistence of this coefficient or its slight increase in two consecutive stages indicates there has been no increase in the consensus of the members and the polling process should be stopped (Schmidt, 1997).

### 6. Data Analysis

The Delphi process was completed in three stages. Copies of the research questionnaire consisting of objectives and KPFs that aligned to four perspectives of the BSC were distributed to each participant to complete. Data was collected for each stage, in person and/or digitally via an email. The results of each round of the research questionnaire were statistically analyzed using the Kendall Coefficient and Coordination method. The Kendall Coefficient and Coordination method is a nonparametric test used to measure the agreement or concordance among raters of information.

### 6.1. The First Stage of the Delphi Method

In the first stage, the participants received a physical and/or a digital copy of the research questionnaire and completed it. The participants ranked each objective and key performance factor using the Likert scale (i.e., very low, low, no idea, high, and very high), based on their expert notion of the impact each objective

and key performance factor could have on the banking system. The research participants responded to the research question as they made their selection.

Research question: How much does each objective and key performance factor included in the table contribute to the different aspects of strategic performance of the Iranian bank industry?

Of the 20 copies of questionnaire distributed, all 20 were filled out and returned for analysis. Refer to **Table 1** to see the original questionnaire which consisted of 16 objectives and 61 measures.

#### Table 1. Primary measures and goals.

Perspective	Objective	Prefix	Key Performance Factor		Low	No Idea	High	Very High
	Increase stock value	F1	Return on capital applied					
		F2	Economic Value Added (Income - Capital Costs)					
	(onarchonaci weardir)	F3	The ratio of market value to book value					
		F4	Compare the price of each unit against the price of competitors					
	Improve cost structure	F5	General and administrative expenses and sales per unit or percentage of sales					
		F6	Cost-to-resources ratio					
		F7	The ratio of revenue to cost of resources					
Financial		F8	Sales/Asset Ratio or (Cost-to-Resources) Ratio					
Fillaliciai	Increase in asset	F9	Suspended to Expense Ratio					
	utilization	F10	Percentage of existing capacity utilization					
		F11	The ratio of income to expenditure					
-		F12	Percentage of business unit customers					
	Improve the value of existing customers	F13	Percentages deferred (deferred charges)					
		F14	Percentage of revenue growth					
		F15	Percentage of business unit customers					
		F16	Percentage of revenue from new products					
		F17	Percentage of revenue from new customers					
		C1	The number of customers we have planned for them					
	Improve income	C2	Percentage of repeat customers					
	opportunities	C3	Customer willingness to recommend the product					
	achieving customer	C4	Percentage of profitability growth in existing customers					
		C5	The consumption rate of return					
Customor		C6	Number of new customers					
Customer	Cain navy quatomana	C7	Net Sales (Expenses - Deals)					
	Gain new customers	C8	Percentage of sales to new customers					
		С9	Cost per new customer					
-		C10	Market share of target customers					
	Improve market share	C11	Cost of resources					
		C12	Amount of suspicious receivables					

Continued	l		
	_	C13	Number or percentage of customers with no returns
	profitability		Number of pending cases
	prontability	C15	Upcoming years (previous customer profitability)
		P1	A high rating and good at delivery cost
		P2	Selling High-Performance Products (Expenses - Deals/ Resources)
	Improve cost, quality,	P3	Incomplete files in the branches
	and time of production	P4	Duration of filing
		P5	Costs of consuming resources
		P6	Costs of providing resources on concessional facilities
		P7	Time management from customer arrival to facility payment
	Improve asset utilization	P8	Capacity utilization (concessional facility balance)
		P9	Percentage of use
		P10	The amount of reliable and available equipment
Internal		P11	% Creating Facility Customers
Process	Gain new customers	P12	Price per unit of new customers
	Increase sales to customers	P13	The number of products and services sold to each customer
		P14	Revenue and profit margin generated from concessional balances (income/concessions)
	Develop innovative products and services	P15	New ideas for product development
		P16	% Register of innovations
	Achieving excellence in the R&D process	P17	Improvement time from production to product arrival at branches
		P18	Product Development Cost
	Improve environmental health-and-safety	P19	Environmental Accidents and Social Impact Safety
	performance	P20	Staff violations
		L1	% Of staff with skills and abilities
	Develop meritocracy	L2	Staff Satisfaction
		L3	Key personnel turnover
Learning	Develop software to support and support strategy	L4	(Strategy Information Coverage) % Operational Processes with Application Support
& Growth	Create a customer-centric	L5	Studying staff culture
	culture	L6	The average shelf life of the person
		L7	Share new ways
	Sharing knowledge about	L8	Average job tenure
	best customer behavior		Percentage of meeting employees' personal goals with the organization's goals

The statistical results for the first stage of the Delphi analysis are included in **Table 2**. The table consists of all the research questions in the questionnaire including their rankings according to the identified descriptive statistics mode, minimum, maximum, standard deviation, median, and mean.

Perspective	Factor Prefix	Mode	Minimum	Maximum	Std. Deviation	Median	Mean
	F1	3	5	2	0.933	3	3.15
	F2	4	5	3	0.671	4	4.15
	F3	3	4	1	0.933	3	2.85
	F4	3	4	1	0.988	3	2.85
	F5	3	3	1	0.801	2.5	2.3
	F6	3	5	2	0.875	3	3.35
	F7	4	5	3	0.639	4	4.25
	F8	2	3	1	0.657	2	2.3
Financial	F9	2	4	1	0.995	2	2.4
	F10	2	3	2	0.605	2	2.45
	F11	5	5	3	0.607	5	4.5
	F12	2	3	2	0.510	2	2.45
	F13	5	5	4	0.513	4.5	4.5
	F14	2	4	1	0.951	2	2.2
	F15	2	3	1	0.605	2	2.05
	F16	1	3	1	0.813	2	1.85
	F17	2	3	1	0.813	2	1.85
	C1	2	3	1	0.718	2	2.1
	C2	3	3	1	0.875	2	2.15
	C3	2	3	1	0.657	2	2.3
	C4	2	3	1	0.639	2	2.25
	C5	3	4	1	1.081	2	2.3
	C6	2	3	1	0.718	2	2.1
	C7	4	5	3	0.639	4	4.25
Customer	C8	2	3	1	0.788	2	1.9
	С9	2	3	1	0.641	2	1.9
	C10	2	2	1	0.510	2	1.55
	C11	4	5	4	0.444	4	4.25
	C12	4	5	3	0.716	4	4.25
	C13	2	3	1	0.745	2	1.85
	C14	4	5	4	0.510	4	4.45
	C15	5	5	4	0.510	5	4.55

Table 2. Results of the first stage of the Delphi test.

Continued							
	P1	2	3	1	0.639	2	1.75
	P2	5	5	4	0.503	5	4.6
	P3	1	2	1	0.605	1.5	1.55
	P4	3	3	1	0.768	2	2.2
	P5	4	5	4	0.470	4	4.3
	P6	3	4	2	0.649	3	3
	P7	2	4	2	0.759	2	2.55
	P8	4	5	4	0.489	4	4.35
	Р9	4	5	3	0.571	4	4.3
Internal Decement	P10	2	4	1	0.933	2	2.15
Internal Process	P11	2	4	1	1.050	2	2.45
	P12	2	3	1	0.616	2	2.2
	P13	4	4	1	1.050	3	2.95
	P14	4	5	3	0.616	4	4.2
	P15	3	4	2	0.759	3	1.75
	P16	3	4	1	0.988	2	2.35
	P17	2	3	2	0.503	2	2.4
	P18	1	3	1	0.875	2	1.85
	P19	2	4	2	0.688	3	2.5
	P20	3	4	2	0.605	2	3.05
	L1	4	4	2	0.801	3.5	3.3
	L2	4	5	3	0.686	4	4.05
	L3	3	4	2	0.671	3	2.85
	L4	3	4	2	0.587	3	2.65
Learning & Growth	L5	2	4	2	0.607	2	2.5
	L6	4	5	2	0.945	4	4.05
	L7	2	4	1	0.967	2	2.25
	L8	5	5	3	0.786	4	4.25
	L9	3	4	2	0.686	3	3.05

#### Continued

Researchers used the mean as a measure of elimination. The KPFs with mean less than three were eliminated from the research questionnaire. As a result, 11 financial KPFs were eliminated, 10 customer KPFs, 12 internal process KPFs, and four learning & growth KPFs.

The anonymous statistical results for the first stage of the Delphi analysis were shared with the participants to allow them to examine the logic of their peers. The participants were able to compare their response to their peer's response to stimulate logic and reasoning in preparation for the second stage of the Delphi analysis. Sharing the anonymous statistical results of the Delphi analysis is a common practice of researchers. (Table 3)

The results of the Kendall test result are 0.634, which is a significant high level of coordination regarding the responses of the respondents. The interpretation of the value of W is high agreement when the W equals 1 and no agreement when W equals 0. The level of consensus among respondents is over 63%.

### 6.2. The Second Stage of the Delphi Method

In the second stage, researchers updated the questionnaire by removing the objectives and KPFs that had low consensus scores, retaining those with the high scores. According to the group consensus, 37 KPFs were removed from the original research questionnaire.

**Table 4** includes the statistical results from the second stage of the Delphi analysis. According to the group consensus, six KPFs were removed from the research questionnaire. Refer to **Table 5**. The participants disagreed with two KPFs from the financial perspective, two from the internal process perspective, and two from the learning and development perspective.

The Kendall coefficients **Table 6** of the second stage is described below:

Table 3. Kendall test results of stage 1.

N	20		
Kendalls W <sup>a</sup>	0.634		
Chi-square	761.104		
Df	60		
Asymp.sig.	0.001		

Table 4. Results of the second stage of the Delphi test.

Perspective	Factor Prefix	Mode	Minimum	Maximum	Std. Deviation	Median	Mean
	F1	3	4	1	0.9105	3	2.75
	F2	5	5	3	0.6048	4.5	4.45
Fin an aial	F6	4	4	1	1.0894	3	2.85
Financial	F7	5	5	3	0.6070	5	4.5
	F11	5	5	4	0.5130	4.5	4.5
	F13	5	5	2	0.8826	5	4.4
	C7	5	5	3	0.6806	4.5	4.4
	C11	5	5	4	0.5104	5	4.55
Customer	C12	4	5	3	0.5871	4	4.35
	C14	5	5	3	0.5871	5	4.65
	C15	4	5	3	0.5871	4	4.35
Internal Process	P2	4	5	3	0.6569	4	4.3
	P5	4	5	3	0.5712	4	4.3

Continueu							
	P6	3	4	1	1.0195	3	2.75
	P8	4	5	3	0.5871	4	4.35
	Р9	5	5	3	0.7452	4.5	4.35
	P14	4	5	3	0.6708	4	4.35
	P15	2	4	2	0.7539	2	2.6
	P20	2	4	2	0.6863	2	2.55
	L1	3	4	1	0.8208	3	2.6
	L2	4	5	4	0.5026	4	4.4
Learning & Growth	L6	4	5	3	0.7678	4	4.2
	L8	4	5	3	0.5501	4	4.25
	L9	2	3	2	0.5104	2	2.45

## Continued

#### Table 5. Eliminated research questions.

Perspective	Objective	Prefix	Key Performance Factor
Financial	Increase stock value (shareholder wealth)	F1	Return on capital applied
Internal Process		P6	Costs of providing resources on concessional facilities
	Improve cost, quality, and time of production	P15	New ideas for product development
	production	P20	Staff violations
I . 0	Develop meritocracy	L1	% Of staff with skills and abilities
Learning & Growth	Sharing knowledge about best customer behavior		Percentage of meeting employees' personal goals with the organization's goals

 Table 6. Kendall test results of stage 2.

Ν	20
Kendalls W <sup>a</sup>	0.651
Chi-square	782.352
Df	23
Asymp.sig.	0.001

Kendall's test result is 0.651, indicating that despite some objectives and KPFs being removed, there is still a high level of consensus amongst the participants.

## 6.3. The Third Stage of the Delphi Method

In the third stage, the second stage objectives and KPFs with the highest score and consensus of the participants were analyzed by the participants, and the results are presented in Table 7.

According to the information in **Table 7**, 18 KPFs proposed in the third stage are four financial perspective KPFs, five customer perspective KPFs, six process

Perspective	Factor Prefix	Mode	Minimum	Maximum	Std. Deviation	Median	Mean
	F11	4	5	4	0.5130	4.5	4.5
Eineneiel	F13	5	5	4	0.5104	5	4.55
Financiai	F2	5	5	4	0.5130	4.5	4.5
	F7	5	5	3	0.6048	5	4.55
	C11	5	5	3	0.6070	5	4.5
	C12	5	5	4	0.5104	5	4.55
Customer	C14	5	5	3	0.6048	4.5	4.45
	C15	5	5	3	0.5871	5	4.65
	C7	4	5	3	0.5871	4	4.35
	P14	5	5	4	0.5104	5	4.55
	P2	5	5	4	0.4894	5	4.65
Internal	P5	5	5	4	0.5130	4.5	4.5
Internal	P6	5	5	4	0.5130	4.5	4.5
	P8	5	5	4	0.5130	4.5	4.5
	P9	5	5	3	0.6070	5	4.5
	L2	4	5	4	0.5130	4.5	2.6
Learning & Growth	L6	5	5	4	0.5026	4.6	4.4
	L8	5	5	4	0.5104	4.55	4.2

Table 7. Results of the third stage of the Delphi test.

 Table 8. Kendall test results of stage 3.

Ν	20
Kendalls W <sup>a</sup>	0.684
Chi-square	782.552
Df	22
Asymp.sig.	0.001

KPFs, and three learning and growth KPFs. According to the group consensus, there were no KPFs removed in the third stage of consensus. **Table 8** presents the results of the Kendall coefficients regarding the third stage.

According to the Kendall test, there was a significant increase in censuses in all three stages 0.634, 0.651, and 0.684, which resulted in a significant level of coordination respectively.

# 7. Conclusion

The results in this research study indicate that the proposed objectives and KPFs for the banking industry in Iran are four financial perspective objectives and four KPFs; three stakeholder perspective objectives and five KPFs; three internal

Perspective	Objective	Prefix	Key Performance Factor
	Increase stock value (shareholder wealth)	F2	Economic Value Added (Income - Capital Costs)
Dia anatal	Improve cost structure	F7	The ratio of revenue to cost of resources
Financial	Increase asset utilization	F11	The ratio of income to expenditure
	Improve the value of existing customers	F13	Percentages deferred (deferred charges)
	Gain new customers	C7	Net Sales (Expenses - Deals)
	T 1,1	C11	Cost of resources
Customer	Improve market share	C12	Amount of suspicious receivables
		C14	Number of pending cases
	Increase customer profitability	C15	Upcoming years (previous customer profitability)
	Improve cost, quality, and time of	P2	Selling High-Performance Products (Expenses - Deals/ Resources)
	production	P5	Costs of consuming resources
I ( ID		P6	Costs of providing resources on concessional facilities
Internal Process	T ,	P8	Capacity utilization (concessional facility balance)
	Improve asset utilization	Р9	Percentage of use
	Increase sales to customers	P14	Revenue and profit margin generated from concessional balances (income/concessions)
	Develop meritocracy	L2	Staff Satisfaction
Learning &	Create a customer-centric culture	L6	The average shelf life of the person
Growth	Sharing knowledge about best customer behavior	L8	Average job tenure

#### Table 9. Objectives and KPIs for all perspectives.

process perspective objectives and six KPFs; and three learning and growth perspective objectives and three KPFs. The identified objectives and KPFs are characterized as the strategic performance priorities for success in the Iranian banking industry. Refer to **Table 9**.

The results of the research study can be used to help leaders in the banking industry in Iran and potentially help leaders of banks across the globe to effectively translate their strategy into the organization, evaluate the performance strength of their organization, and mobilize their people who must engage in the work.

# **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

## References

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. Journal of

Management, 17, 99-120. https://doi.org/10.1177/014920639101700108

- Bošković, A., & Krstić, A. (2020). The Combined Use of Balanced Scorecard and Data Envelopment Analysis in the Banking Industry. *Business Systems Research, 11,* 4-15. https://doi.org/10.2478/bsrj-2020-0001
- Bremser, W. G., & White, L. F. (2000). An Experiential Approach to Learning about the Balanced Scorecard. *Journal of Accounting Education*, *18*, 241-255. https://doi.org/10.1016/S0748-5751(00)00016-6
- Breznik, L., & Lahovnik, M. (2014). Renewing the Resource Base in Line with the Dynamic Capabilities View: A Key to Sustained Competitive Advantage in the IT Industry. *Journal for East European Management Studies*, 19, 453-485. https://doi.org/10.5771/0949-6181-2014-4-453
- Gazi, F., Atan, T., & Kılıç, M. (2022). The Assessment of Internal Indicators on the Balanced Scorecard Measures of Sustainability. *Sustainability*, 14, Article No. 8595. <u>https://doi.org/10.3390/su14148595</u>
- Ibrahim, M., & Murtala, S. (2015). The Relevance of Balanced Scorecard as a Technique for Assessing Performance in the Nigerian Banking Industry. *European Journal of Business, Economics and Accountancy*, 3, 71-80.
- Kaplan, R. S., & Norton, D. P. (2001). The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment. Harvard Business Press.
- Kaplan, R. S., & Norton, D. P. (2004). Strategy Maps: Converting Intangible Assets into Tangible Outcomes. Harvard Business Press.
- Kaplan, R. S., & Norton, D. P. (2006). Alignment: Using the Balanced Scorecard to Create Corporate Synergies. Harvard Business Press.
- Kaplan, R. S., & Norton, D. P. (2008). *The Execution Premium: Linking Strategy to Operations for Competitive Advantage.* Harvard Business Press.
- Keshavarznia, H., & Valipour, H. (2017). Measuring the Customers' Loyalty to Mehr-Eghtesad Bank with Balanced Scorecard Approach. *HELIX*, *7*, 960-966.
- Norton, D. (2017). Balanced Scorecard Framework [Video File].
- Ozturk, E., & Coskun, A. (2014). A Strategic Approach to Performance Management in Banks: The Balanced Scorecard. *Accounting and Finance Research, 3*, 151-158. https://doi.org/10.5430/afr.v3n3p151
- Risinger, J. A. (2018). *Toward a Model of Strategic Human Capital Management Using the Balanced Scorecard-An Exploratory Case Study.* Ph.D. Thesis, University of Texas at Tyler.

https://scholarworks.uttyler.edu/cgi/viewcontent.cgi?article=1035&context=hrd\_grad

- Rostami, M., Goudarzi, A., & Zaj, M. (2015). Defining Balanced Scorecard Aspects in Banking Industry Using FAHP Approach. *International Journal of Economics and Business Administration, 1,* 25-38.
- Schmidt, R. C. (1997). Managing Delphi Surveys Using Nonparametric Statistical Techniques. *Decision Sciences*, 28, 763-774. https://doi.org/10.1111/j.1540-5915.1997.tb01330.x
- Gentry, B. S. D. (2003). *Balanced Scorecard: An Instrument of Change for Facilities Services*.

https://scholarworks.lib.csusb.edu/cgi/viewcontent.cgi?article=3197&context=etd-proje ct

Teece, D. J. (2000). Managing Intellectual Capital: Organizational, Strategic and Policy

Dimensions. Oxford University Press.

Wilson, C., Hagarty, D., & Gauthier, J. (2004). Results Using the Balanced Scorecard in the Public Sector. *Journal of Corporate Real Estate, 6,* 53-64. https://doi.org/10.1108/14630010410812234